Postpartum Care

POSTPARTUM FOLLOW-UP OF HIV-INFECTED WOMEN

Panel's Recommendations:

- ***The decision to continue or stop antiretroviral therapy after delivery depends on the nadir CD4 count, clinical symptoms/disease stage, presence of other indications for antiretroviral therapy, and patient and provider preference.***
- ***The immediate postpartum period poses unique challenges for adherence; new or continued supportive services should be assured prior to hospital discharge.***
- ***Women with a positive rapid HIV antibody test during labor require comprehensive follow-up, including confirmation of HIV infection and full health assessment including evaluation for associated medical conditions, counseling related to newly diagnosed HIV infection, and assessment of need for antiretroviral therapy.***
- ***Breastfeeding is not recommended for HIV-infected women in the United States, where safe, affordable, and feasible alternatives are available and culturally acceptable.***
- ***Contraceptive counseling is a critical aspect of postpartum care. Although condoms are universally recommended for prevention of STD/HIV transmission, the unintended pregnancy rate with condom use alone is high.***
- ***The postpartum period provides an opportunity to review and optimize women's health care, including cervical cancer screening, routine immunizations, mental health and substance abuse treatment as indicated, and assessment for signs of postpartum depression.***

Comprehensive care and support services are particularly important for women with HIV infection and their families, who often face multiple social and medical challenges. Components of comprehensive care include the following medical and supportive care services:

a. primary, gynecologic/obstetric, pediatric, and HIV specialty care;

b. family planning services;

c. mental health services;

d. substance abuse treatment;

e. support services; and

f. coordination of care through case management for the woman, her children, and other family members.

Support services should be tailored to the individual woman's needs and may include case management, child care, respite care, assistance with basic life needs (e.g., housing, food, and transportation), peer counseling, and legal and advocacy services. Ideally, this care should begin before pregnancy and should be continued throughout pregnancy and postpartum.

Maternal medical services during the postpartum period must be coordinated between obstetric care providers and HIV specialists. Continuity of antiretroviral treatment when such treatment is required for the woman's HIV infection is especially critical and must be ensured. The decision whether or not to continue antiretroviral therapy after delivery will depend on the woman's nadir CD4 count, clinical symptoms/disease stage, presence of other indications for antiretroviral therapy, and patient and provider preference. Ideally, a discussion of these factors should occur well before delivery.

Concerns have been raised about adherence to antiretroviral regimens during the postpartum period. Women should be counseled about the fact that the physical and psychological changes of the postpartum period, as well as the stresses and demands of caring for a new baby, might make adherence more difficult and additional support may be needed to maintain good adherence to their therapeutic antiretroviral regimen during this period *[1-3]*. The health care provider should be vigilant for signs of depression and illicit drug or alcohol use, which may require assessment and treatment and which may interfere with adherence. Poor adherence has been shown to be associated with virologic failure, development of resistance, and decreased long-term effectiveness of antiretroviral therapy *[4-9]*. Efforts to maintain adequate adherence during the postpartum period might prolong the effectiveness of therapy. The **Adherence** section in the ***Guidelines for the Use of Antiretroviral Agents in HIV-Infected Adults and Adolescents*** is available at the AIDS*info* Web site (**http://www.AIDSinfo.nih.gov**).

Women with nadir CD4 counts <350 cells/mm^3 and/or symptomatic HIV infection should be encouraged to continue antiretroviral therapy postpartum with no interruption. For women who began antiretroviral therapy with a nadir CD4 count ≥350 cells/mm^3 for prophylaxis of transmission, the decision on whether to continue therapy after delivery should be made in consultation with her HIV provider, taking into account current and nadir CD4+ lymphocyte counts and trajectory, HIV RNA levels, and patient preference. For women who received an NNRTI drug as part of the antepartum regimen and who plan to stop antiretroviral therapy after delivery, consideration should be given to stopping the NNRTI and continuing the other antiretroviral drugs for a short period of time (e.g., 7 days) to decrease the risk of NNRTI resistance (see **Stopping Antiretroviral Therapy during Pregnancy**).

A clinical trial in HIV-infected nonpregnant adults that evaluated planned interruption of treatment in individuals who required therapy (mean duration on treatment: 6 years) and had normalized their CD4 counts to >350 cells/mm^3 compared to continued therapy found higher rates of progression and death in the treatment interruption group *[10]*. Among women with indications for continued antiretroviral therapy postpartum, planned interruption of antiretroviral therapy for several weeks or months has not been studied prospectively and cannot be recommended as a strategy to deal with the risk of incomplete adherence and virologic failure. Instead, every effort should be made to maximize adherence. Simplification of an antiretroviral regimen (for example, to once-daily medications) could also be considered. Interruption of antiretroviral therapy postpartum among women who require treatment for their own health, although preferable to intermittent adherence and virologic failure, should be a last resort.

Data on follow-up of women from PACTG 076 who received antepartum and intrapartum ZDV prophylaxis with discontinuation of drug after delivery (median follow-up 4 years) demonstrated no difference in clinical, immunologic, virologic, and resistance status compared to women who received placebo *[11]*. Among women with CD4 cell counts >350 cells/mm^3 followed in the Women and Infants Transmission Study (WITS) cohort, there were no significant differences in CD4 count or disease progression among those who did or did not continue antiretroviral treatment after delivery *[12]*. However, for women receiving current combination antiretroviral prophylaxis regimens with no indication to continue antiretroviral therapy postpartum, the effect of limited-duration, fully suppressive antiretroviral prophylaxis in pregnancy on future treatment efficacy is unknown, and further research is needed. Such women may eventually require antiretroviral therapy again in the context of subsequent pregnancies or for advancing HIV disease.

Women with a positive rapid HIV antibody test during labor or at delivery require comprehensive medical assessment, counseling, and follow-up. Confirmatory HIV antibody testing should be performed as soon as possible after an initial positive rapid test to minimize the delay for definitive diagnosis *[13]*. Women with a positive rapid HIV antibody test should not breastfeed (unless the confirmatory HIV test is negative). Women with a new HIV diagnosis postpartum should receive the same thorough evaluation as other newly identified infected patients, including consideration of antiretroviral therapy. Other children and the woman's partners should be referred for HIV testing.

Postpartum HIV transmission via breast milk is well documented and the risk of transmission is related to a variety of factors, including maternal health status and breast milk cell-free and cell-associated viral load *[14]*. There are no safe methods to treat breast milk that will effectively eradicate the risk of HIV transmission associated with breastfeeding. There are limited data regarding the penetration of antiretroviral drugs into breast milk. The available data indicate that there is differential penetration of drugs into milk, with some drugs having high levels while others may have low or undetectable levels in breast milk, which raises concerns regarding both infant toxicity and selection of drug-resistant virus within breast milk *[15,16]*. Additionally, drug levels in the neonate may be subtherapeutic and cannot be relied on to interrupt breast milk HIV transmission. Accordingly, in the United States and other parts of the world where replacement feeding is affordable, feasible, acceptable, sustainable, and safe, breastfeeding by HIV-infected women (including those receiving antiretroviral drugs) is not recommended *[17]*.

Contraceptive counseling is a critical aspect of postpartum care. Although condoms are universally recommended for prevention of STD/HIV transmission, the unintended pregnancy rate even with consistent condom use alone is estimated at 10% – 15% annually. Women should be educated about the risk of unintended pregnancy when condoms are the sole contraceptive method used. If another pregnancy is not desired in the near future and/or if the antiretroviral regimen contains potentially teratogenic agents such as EFV, women should be offered dual-method contraception *[18]*. Reversible options include intrauterine devices and hormonal methods. Emergency contraception should not be recommended for routine use as a form of contraception but should be provided for use within 72 hours after an episode of unprotected intercourse or broken condom for women declining additional contraception. Drug interactions have been documented between oral contraceptives and many NNRTI and PI drugs (see the ***Guidelines for the Use of Antiretroviral Agents in HIV-Infected Adults and Adolescents*, Tables 21a and 21b**) *[19]*; these interactions do not necessarily rule out the use of hormonal contraceptive methods because there is no clear evidence of an effect on contraceptive or ARV efficacy or toxicity. However, amprenavir/fosamprenavir levels are significantly lowered by oral contraceptives and co-administration is not recommended; it is not known if low-dose ritonavir

boosting raises amprenavir levels sufficiently to allow co-administration. Depot medroxyprogesterone acetate (Depo-Provera, DMPA) pharmacokinetics are not significantly affected by NVP, EFV, or nelfinavir, and levels of these drugs were not significantly altered by DMPA *[20]*. Potential interactions between antiretroviral agents and the transdermal contraceptive patch, vaginal ring, and other injectable contraception have not yet been defined. Permanent sterilization is an appropriate option only for those women who are certain they do not desire future childbearing. Advance counseling and discussion about sterilization is strongly encouraged in order to enable the woman to make a well-informed choice. A woman's HIV status does not affect the suitability of sterilization as a permanent contraceptive method.

The postpartum period provides an opportunity to review and optimize women's health care; this should include assessing the need for prophylaxis against opportunistic infections, cervical cancer screening, and routine immunizations. This period also provides an opportunity to assess the need for behavioral health interventions; this should include mental health screening, including an assessment for signs of postpartum depression, and substance abuse treatment as indicated. Providers should also re-emphasize the importance of safer sex practices.

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